

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NE-05-AD; Amendment 39-13941; AD 2005-01-16]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc RB211 Trent 700 Series Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for Rolls-Royce plc (RR) RB211 Trent 768-60, Trent 772-60, and Trent 772B-60 turbofan engines with low pressure compressor (LPC) fan blade part numbers FK22580, FK23411, FK25441, and FK25968 installed. That AD currently requires initial ultrasonic inspections of the fan blade root with blades removed, repetitive ultrasonic inspections of the fan blade root with blades removed or installed, and ultrasonic inspection of the fan blade root to be done with the fan blades removed at least every third inspection. This AD requires the same inspections but at lower thresholds and intervals, and eliminates the requirement for ultrasonic inspection with the fan blades removed at least every third inspection. This AD results from analysis of flight data returned to RR, that shows a need for consistent inspection thresholds for all engine models. We are issuing this AD to prevent possible multiple LPC fan blade failures, which could result in an uncontained engine failure and damage to the airplane.

DATES: Effective January 28, 2005. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of January 28, 2005.

We must receive any comments on this AD by March 14, 2005.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- By mail: Federal Aviation Administration (FAA), New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-05-AD, 12 New England Executive Park, Burlington, MA 01803-5299.
- By fax: (781) 238-7055.
- By e-mail: 9-ane-adcomment@faa.gov.

You can get the service information referenced in this AD from Rolls-Royce plc, PO Box 31, Derby, England; telephone: 011-44-1332-249428; fax: 011-44-1332-249223.

You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. You may examine the AD docket at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Christopher Spinney, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (781) 238-7175; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION: On August 1, 2001, we issued AD 2001-16-05, Amendment 39-12373 (66 FR 42105, August 10, 2001). That AD requires initial ultrasonic inspections of the fan blade root with blades removed, repetitive ultrasonic inspections of the fan blade root with blades removed or installed, and ultrasonic inspections to be done with the fan blades removed at least every third inspection. That AD resulted from reports of fan blade failures due to dovetail root cracks. That condition, if not corrected, could result in possible multiple LPC fan blade failures, uncontained engine failure, and damage to the airplane.

Actions Since AD 2001-16-05 Was Issued

Since that AD was issued, analysis of flight data returned to RR shows a need for consistent inspection thresholds for all engine models. The actions specified in this AD are intended to prevent possible multiple LPC fan blade failures, which could result in an uncontained engine failure and damage to the airplane.

Special Flight Permits Paragraph Removed

Paragraph (g) of the current AD, AD 2001-16-05, contains a paragraph pertaining to special flight permits. Even though this final rule does not contain a similar paragraph, we have made no changes with regard to the use of special flight permits to operate the airplane to a repair facility to do the work required by this AD. In July 2002, we published a new Part 39 that contains a general authority regarding special flight permits and airworthiness directives; see Docket No. FAA-2004-8460, Amendment 39-9474 (69 FR 47998, July 22, 2002). Thus, when we now supersede ADs we will not include a specific paragraph on special flight permits unless we want to limit the use of that general authority granted in section 39.23.

Relevant Service Information

We have reviewed and approved the technical contents of RR Mandatory Service Bulletin (MSB) No. RB.211-72-C878, Revision 7, dated December 5, 2003, that:

- Removes LPC fan blades and performs initial and repetitive ultrasonic inspections for cracks in LPC fan blade dovetail roots, at earlier initial thresholds than the inspections required by the current AD, and, at adjusted repetitive inspection intervals from the current AD.
- Provides a procedure that does not require blade removal from the engine in order to perform repetitive ultrasonic inspections for cracks in LPC fan blade dovetail roots.

Bilateral Airworthiness Agreement

This engine model is manufactured in the United Kingdom and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the Civil Aviation Authority (CAA) has kept the FAA informed of the situation described above. The FAA has examined the findings of the CAA, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

FAA's Determination of an Unsafe Condition and Proposed Actions

Although none of these affected engine models are used on any airplanes that are registered in the United States, the possibility exists that the engine models could be used on airplanes that are registered in the United States in the future. Since an unsafe condition has been identified that is likely to exist or develop on other RR RB211 Trent 768-60, Trent 772-60, and Trent 772B-60 turbofan engine models of the same type design, this AD is being issued to prevent possible multiple LPC fan blade failures, which could result in an uncontained engine failure and damage to the airplane. This AD requires:

- Initial ultrasonic inspections of the fan blade root with blades removed; at or before accumulating 1,100 cycles-since-new (CSN) on the fan blades after the effective date of the AD; and
- For blades with more than 1,100 CSN that have not been previously inspected, initial ultrasonic inspections of the fan blade root with blades removed; within 300 cycles-in-service (CIS) from the effective date of the AD or within 2,000 CSN, whichever occurs first; and
- Repetitive ultrasonic inspections of the fan blade root, with blades removed within 300 CIS intervals, or with blades not removed within 250 CIS intervals.

The actions are required to be done using the service bulletin described previously.

Immediate Adoption of This AD

Since there are currently no domestic operators of these engine models, notice and opportunity for prior public comment are unnecessary. Therefore, a situation exists that allows the immediate adoption of this regulation.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any written relevant data, views, or arguments regarding this AD. Send your comments to an address listed under ADDRESSES. Include "AD Docket No. 2000-NE-05-AD" in the subject line of your comments. If you want us to acknowledge receipt of your mailed comments, send us a self-addressed, stamped postcard with the docket number written on it; we will date-stamp your postcard and mail it back to you. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify it. If a person contacts us verbally, and that contact relates to a substantive part of this AD, we will summarize the contact and place the summary in the docket. We will consider all comments received by the closing date and may amend the AD in light of those comments.

Examining the AD Docket

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See ADDRESSES for the location.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a summary of the costs to satisfy the initial requirements of this AD and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "AD Docket No. 2000-NE-05-AD" in your request.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by removing Amendment 39-12373 (66 FR 42105, August 10, 2001), and by adding a new airworthiness directive (AD), Amendment 39-13941, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-01-16 Rolls-Royce plc: Amendment 39-13941. Docket No. 2000-NE-05-AD. Supersedes AD 2001-16-05, Amendment 39-12373.

Effective Date

- (a) This AD becomes effective January 28, 2005.

Affected ADs

- (b) This AD supersedes AD 2001-16-05, Amendment 39-12373.

Applicability

- (c) This AD applies to Rolls-Royce plc (RR) RB211 Trent 768-60, Trent 772-60, and Trent 772B-60 turbofan engines with low pressure compressor (LPC) fan blade part numbers FK22580, FK23411, FK25441, and FK25968 installed. These engines are installed on, but not limited to, Airbus A330 series airplanes.

Unsafe Condition

- (d) This AD supersedure results from analysis of flight data returned to RR, that shows a need for consistent inspection thresholds for all engine models. We are issuing this AD to prevent possible multiple LPC fan blade failures, which could result in an uncontained engine failure and damage to the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Initial Ultrasonic Inspection

- (f) Perform an initial ultrasonic inspection of the LPC fan blade dovetail roots using Method A (paragraphs 3.A.(1) through 3.A.(8); blades removed from engine) of Accomplishment Instructions of RR Mandatory Service Bulletin (MSB) No. RB.211-72-C878, Revision 7, dated December 5, 2003, as follows:

- (1) Inspect before accumulating 1,100 cycles-since-new (CSN) on the fan blades; or

(2) For fan blades that have accumulated more than 800 CSN on the effective date of this AD that have not been previously inspected, inspect within 300 cycles-in-service (CIS) from the effective date of this AD or within 2,000 CSN, whichever occurs first.

Repetitive Ultrasonic Inspections

(g) Perform repetitive inspections of the LPC fan blades using Method A, or Method B (paragraphs 3.B.(1) through 3.B.(5); blades not removed from the engine) of the Accomplishment Instructions of RR MSB No. RB.211-72-C878, Revision 7, dated December 5, 2003, as follows:

- (1) Inspect within 300 CIS since-last-inspected with Method A of the SB; or
- (2) Inspect within 250 CIS since-last-inspected with Method B of the SB.

Alternative Methods of Compliance

(h) The Manager, Engine Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(i) You must use the Rolls-Royce plc service information specified in Table 1 of this AD to perform the blade inspections and replacements required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 1 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Rolls-Royce plc, PO Box 31, Derby DE24 6BJ, UK; telephone 44 (0) 1332 242424; fax 44 (0) 1332 249936. You may review copies at the FAA, New England Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-NE-05-AD, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Table 1 follows:

TABLE 1.—INCORPORATION BY REFERENCE

| Mandatory service bulletin No. | Page | Revision | Date |
|--|-------------|-----------------|-------------------|
| RB.211-72-C878 Total Pages: 9 | All | 7 | December 5, 2003. |
| RB.211-72-C878, Appendix 1 Total Pages: 4 | All | 7 | December 5, 2003. |
| RB.211-72-C878, Appendix 2 Total Pages: 5 | All | 7 | December 5, 2003. |

Related Information

(j) United Kingdom Civil Aviation Authority airworthiness directive 003-11-99 also addresses the subject of this AD.

Issued in Burlington, Massachusetts, on January 4, 2005.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 05-484 Filed 1-12-05; 8:45 am]

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